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From-PATTON BOGGS

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Application No. 10/719859
Amendment dated November 29, 2005
Reply to Office Action of October 20, 2005

Docket No.: 013436.0283CIUS
Bolland 11-28
(Formerly 13436.285)

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A message waiting indication update feature, operable in a cellular communication network, for maintaining a count of the unread messages stored for a subscriber who uses a mobile subscriber wireless communication device, comprising:

Home Location Register means, associated with said subscriber's home Mobile Switching Center, for maintaining a profile for said subscriber comprising a set of data that identifies said subscriber, service authorizations for said subscriber, said data indicative of a present count of unread messages for said subscriber, and data indicative of a present count of acknowledged unread messages for said subscriber;

subscriber profile means for storing data in said Home Location Register means indicative of a present count of unread messages for said subscriber;

subscriber acknowledgement means for storing data in said Home Location Register means indicative of a present count of acknowledged unread messages for said subscriber;

border condition determining means for identifying that a cell last accessed by said mobile subscriber wireless device is on a border with a Mobile Switching Center other than the serving Mobile Switching Center;

Mobile Switching Center message indication means, responsive to the presence of unread messages in excess of those identified in said present count of acknowledged unread messages for said subscriber, for transmitting data indicative of a present count of unread messages for said subscriber to said other Mobile Switching Center; and

message indication means, responsive to the presence of unread messages in excess of those identified in said present count of acknowledged unread messages for said subscriber, for transmitting data to said subscriber indicative of a present count of unread messages for said subscriber.

Claims 2 and 3 (Canceled)

4. (Currently amended) The message waiting indication update feature of claim [[3]] 1 further comprising:

registration means, operable in a serving Mobile Switching Center and responsive to said subscriber initiating a registration process from a mobile subscriber wireless communication device at said serving Mobile Switching Center, for transmitting a registration request message to said

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Home Location Register means, associated with said subscriber's home Mobile Switching Center;
and

registration indication result means for transmitting said data indicative of a present count of unread messages for said subscriber, and said data indicative of a present count of acknowledged unread messages for said subscriber to said serving Mobile Switching Center.

5. (Original) The message waiting indication update feature of claim 4 further comprising:

register update means for storing said data indicative of a present count of unread messages for said subscriber, and said data indicative of a present count of acknowledged unread messages for said subscriber in a visited location register associated with said serving Mobile Switching Center.

6. (Original) The message waiting indication update feature of claim 4 wherein said message indication means comprises:

registration means, operable in a serving Mobile Switching Center and responsive to said data indicative of a present count of unread messages for said subscriber, and said data indicative of a present count of acknowledged unread messages for said subscriber indicating the presence of unread messages in excess of those identified in said present count of acknowledged unread messages for said subscriber, for transmitting data to said mobile subscriber wireless communication device indicative of a present count of unread messages for said subscriber.

7. (Currently amended) The system message waiting indication update feature of claim 6 further comprising:

registration update means, responsive to said mobile subscriber wireless communication device acknowledging receipt of said data indicative of a present count of unread messages for said subscriber, for transmitting a message to said Home Location Register means, associated with said subscriber's home Mobile Switching Center acknowledging receipt by said mobile subscriber wireless communication device of said data indicative of a present count of unread messages for said subscriber; and

register update means operable in said subscriber's home Mobile Switching Center for updating said data indicative of a present count of acknowledged unread messages for said subscriber in said Home Location Register means.

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Claim 8 (Canceled)

9. (Currently amended) ~~The system of claim 8 further~~ A message waiting indication update feature, operable in a cellular communication network for maintaining a count of the unread messages stored for a subscriber who uses a mobile subscriber wireless communication device, comprising:

storing data in a Home Location Register indicative of a present count of unread messages for said subscriber;

border condition determining means for identifying that a cell last accessed by said mobile subscriber wireless device is on a border with a Mobile Switching Center other than the serving Mobile Switching Center;

Mobile Switching Center message indication means, responsive to the presence of unread messages in excess of those identified in said present count of acknowledged unread messages for said subscriber, for transmitting data indicative of a present count of unread messages for said subscriber to said other Mobile Switching Center; and

register update means, responsive to a change in said data indicative of a present count of unread messages for said subscriber, for storing said data indicative of a present count of unread messages for said subscriber, and said data indicative of a present count of acknowledged unread messages for said subscriber in a visited location register associated with said serving Mobile Switching Center.

10. (Currently amended) ~~The system~~ message waiting indication update feature of claim 9 wherein said message indication means comprises:

registration means, operable in a serving Mobile Switching Center and responsive to said data indicative of a present count of unread messages for said subscriber, and said data indicative of a present count of acknowledged unread messages for said subscriber indicating the presence of unread messages in excess of those identified in said present count of acknowledged unread messages for said subscriber, for transmitting data to said mobile subscriber wireless communication device indicative of a present count of unread messages for said subscriber.

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[[12]] 11. (Currently amended) The system of claim [[11]] 10 further comprising:
registration update means, responsive to said mobile subscriber wireless communication device acknowledging receipt of said data indicative of a present count of unread messages for said subscriber, for transmitting a message to said Home Location Register means, associated with said subscriber's home Mobile Switching Center acknowledging receipt by said mobile subscriber wireless communication device of said data indicative of a present count of unread messages for said subscriber; and

register update means operable in said subscriber's home Mobile Switching Center for said data indicative of a present count of acknowledged unread messages for said subscriber in said Home Location Register means.

12. (New) A message waiting indication update feature, operable in a cellular communication network, for maintaining a count of the unread messages stored for a subscriber who uses a mobile subscriber wireless communication device, comprising:

maintaining, in the Home Location Register associated with said subscriber's home Mobile Switching Center, a profile for said subscriber comprising a set of data that identifies said subscriber, service authorizations for said subscriber, said data indicative of a present count of unread messages for said subscriber, and data indicative of a present count of acknowledged unread messages for said subscriber;

storing data in said Home Location Register indicative of a present count of unread messages for said subscriber;

storing data in said Home Location Register indicative of a present count of acknowledged unread messages for said subscriber;

identifying that a cell last accessed by said mobile subscriber wireless device is on a border with a Mobile Switching Center other than the serving Mobile Switching Center;

transmitting, in response to the presence of unread messages in excess of those identified in said present count of acknowledged unread messages for said subscriber, data indicative of a present count of unread messages for said subscriber to said other Mobile Switching Center; and

transmitting, in response to the presence of unread messages in excess of those identified in said present count of acknowledged unread messages for said subscriber, data to said subscriber indicative of a present count of unread messages for said subscriber.

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13. (New) The message waiting indication update feature of claim 12 further comprising:

transmitting, from a serving Mobile Switching Center and in response to said subscriber initiating a registration process from a mobile subscriber wireless communication device at said serving Mobile Switching Center, a registration request message to said Home Location Register means, associated with said subscriber's home Mobile Switching Center; and

transmitting said data indicative of a present count of unread messages for said subscriber, and said data indicative of a present count of acknowledged unread messages for said subscriber to said serving Mobile Switching Center.

14. (New) The message waiting indication update feature of claim 13 further comprising:

storing said data indicative of a present count of unread messages for said subscriber, and said data indicative of a present count of acknowledged unread messages for said subscriber in a visited location register associated with said serving Mobile Switching Center.

15. (New) The message waiting indication update feature of claim 13 wherein said step of transmitting message indication data comprises:

transmitting, from a serving Mobile Switching Center and in response to said data indicative of a present count of unread messages for said subscriber, and said data indicative of a present count of acknowledged unread messages for said subscriber indicating the presence of unread messages in excess of those identified in said present count of acknowledged unread messages for said subscriber, data to said mobile subscriber wireless communication device indicative of a present count of unread messages for said subscriber.

16. (New) The message waiting indication update feature of claim 15 further comprising:

transmitting, in response to said mobile subscriber wireless communication device acknowledging receipt of said data indicative of a present count of unread messages for said subscriber, a message to said Home Location Register, associated with said subscriber's home Mobile Switching Center acknowledging receipt by said mobile subscriber wireless communication device of said data indicative of a present count of unread messages for said subscriber; and

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updating said data indicative of a present count of acknowledged unread messages for said subscriber in said Home Location Register.

17. (New) A message waiting indication update feature, operable in a cellular communication network, for maintaining a count of the unread messages stored for a subscriber who uses a mobile subscriber wireless communication device, comprising:

storing data in a Home Location Register indicative of a present count of unread messages for said subscriber;

identifying that a cell last accessed by said mobile subscriber wireless device is on a border with a Mobile Switching Center other than the serving Mobile Switching Center;

transmitting, in response to the presence of unread messages in excess of those identified in said present count of acknowledged unread messages for said subscriber, data indicative of a present count of unread messages for said subscriber to said other Mobile Switching Center; and

storing, in response to a change in said data indicative of a present count of unread messages for said subscriber, said data indicative of a present count of unread messages for said subscriber, and said data indicative of a present count of acknowledged unread messages for said subscriber in a visited location register associated with said serving Mobile Switching Center.

18. (New) The message waiting indication update feature of claim 17 wherein said step of transmitting message indication data comprises:

transmitting, from a serving Mobile Switching Center and in response to said data indicative of a present count of unread messages for said subscriber, and said data indicative of a present count of acknowledged unread messages for said subscriber indicating the presence of unread messages in excess of those identified in said present count of acknowledged unread messages for said subscriber, data to said mobile subscriber wireless communication device indicative of a present count of unread messages for said subscriber.

19. (New) The message waiting indication update feature of claim 18 further comprising:

transmitting, in response to said mobile subscriber wireless communication device acknowledging receipt of said data indicative of a present count of unread messages for said subscriber, a message to said Home Location Register, associated with said subscriber's home

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Mobile Switching Center acknowledging receipt by said mobile subscriber wireless communication device of said data indicative of a present count of unread messages for said subscriber; and
updating said data indicative of a present count of acknowledged unread messages for said subscriber in said Home Location Register.

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